REMARKS/ARGUMENTS

In parent application 09/205,029, the Examiner objected to the drawings under 37 C.F.R. § 1.83(a) for not showing a combining circuit. Applicants added new Figure 8 which was accepted by the Examiner. Figure 8 presented herewith is the same as Figure 8 submitted in the parent application and which was accepted by the Examiner. Figure 8 shows connection of existing circuit blocks in the instant specification according to the present invention. Applicants have amended the specification to describe figure 8 with respect to other circuit blocks. No new matter is added.

All of the above amendments to the specification were accepted by the Examiner in parent application 09/205,029. Accordingly, the amendments to the specification should again be accepted by the Examiner in the present application.

Claims 14, 15, 17-19, 21, 22 and 66-68 in parent application 09/205,029 were rejected under 35 U.S.C. 102(e) as being anticipated by Alamouti et al. (6,185,258). Applicants traversed this rejection in the parent application and continue to traverse this rejection. Applicants hereby resubmit Claims 14 (including proposed amendment of 4/23/03), 15, 17-19, 21, 22 and 66-68 in parent application 09/205,029, as new Claims 23-33, respectively, and further traverses the above rejection as set forth below.

Independent Claim 23, as amended, requires and positively recites, a mobile communication system, comprising: "a mobile antenna arranged to receive a plurality of signals **from multiple signal paths from each of plural remote antennas** of an external source", "an input circuit coupled to receive the plurality of signals from the mobile antenna, the input circuit producing a plurality of input signals including a first input signal from a first remote antenna and a second input signal from a second remote antenna, at least one of the first and at least one of the second input signals corresponding to the same datum" and "a correction circuit coupled to receive a plurality of first estimate signals, a second estimate signal and the first and second input signals, the plurality of first estimate signals corresponding to respective signal paths of the first input

signal, the correction circuit producing a first symbol estimate an a second symbol estimate in response to the first and second estimate signals and the first and second input signals".

In contrast, the Alamouti reference discloses an apparatus in which there is a SINGLE signal path from each of plural remote antennas 31 and 32 to remote antenna 51 since the disclosure is limited to time division multiple access (TDMA). As a result, Alamouti fails to disclose multiple signal paths between a transmit antenna 31 OR 32 and a receive antenna 51 or 52.

In order that the rejection of any of Claims 23-33 be sustainable, it is fundamental that "each and every element as set forth in the claim be found, either expressly or inherently described, in a single prior art reference." Verdegall Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See also, Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989), where the court states, "The identical invention must be shown in as complete detail as is contained in the ... claim".

Furthermore, "all words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

From the discussion above, it is apparent that independent Claim 23, as amended, is not anticipated by Alamouti. Moreover, the Examiner has provided no evidence from the prior art that would lead one having ordinary skill in the art to re-engineer the Alamouti device to have multiple signal paths between a transmit antenna 31 or 32 and a receive antenna 51 or 52, without the improper hindsight provided by Applicant's disclosure

Claims 24, 26-28, 29, 30 and 31-33 stand allowable as depending, directly or indirectly, from allowable Claim 23 and including further limitations not taught or suggested by the references of record.

Dependent Claim 24 requires and positively recites, a mobile communication system as in claim 23, further comprising a combining circuit coupled to receive a plurality of first symbol estimates including the first symbol estimate and coupled to receive a plurality of second symbol estimates including the second symbol estimate, the combining circuit producing a first symbol signal in response to the plurality of first symbol estimates and producing a second symbol signal in response to the plurality of second symbol estimates. Alamouti fails to teach or suggest this additional limitation in combination with the other requirements of Claim 23.

Dependent Claim 25 requires and positively recites a mobile communication system as in claim 24, wherein the input circuit, the correction circuit and the combining circuit are formed on a single integrated circuit. Alamouti fails to teach or suggest this additional limitation in combination with the other requirements of Claim 24.

Dependent Claim 26 requires and positively recites a mobile communication system as in claim 24, wherein each of the first and second symbol signals include at least one of a pilot symbol, a transmit power control symbol, a rate information symbol and a data symbol. Being that Alamouti discloses a TDMA system, it fails to teach or suggest this additional limitation in combination with the other requirements of Claim 24.

Dependent Claim 27 requires and positively recites a mobile communication system as in claim 23, wherein each of the first and second estimate signals is a Rayleigh fading parameter estimate. Alamouti fails to teach or suggest this additional limitation in combination with the other requirements of Claim 23.

Dependent Claim 28 requires and positively recites a mobile communication system as in claim 23, wherein a total diversity of each of the first and second symbol signals is at least twice a number of the plural remote antennas. Alamouti fails to teach or suggest this additional limitation in combination with the other requirements of Claim 23.

Dependent Claim 29 requires and positively recites a mobile communication system as in claim 23, wherein each of the first and second input signals is a wideband code division multiple access signal. Being that Alamouti discloses TDMA transmission, Alamouti fails to teach or suggest this additional limitation in combination with the other requirements of Claim 23.

Dependent Claim 30 requires and positively recites a mobile communication system as in claim 29, wherein a total diversity of each of the first and second symbol signals is at least twice a number of the plural remote antennas. Alamouti fails to teach or suggest this additional limitation in combination with the other requirements of Claim 29.

Dependent Claim 31 requires and positively recites a mobile communication system as in claim 23, wherein the mobile antenna receives the first and second input signals over a common channel. Alamouti fails to teach or suggest this additional limitation in combination with the other requirements of Claim 23.

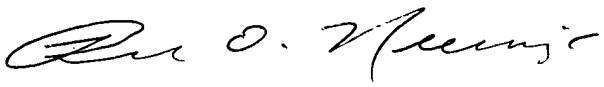
Dependent Claim 32 requires and positively recites a mobile communication system as in claim 23, wherein the mobile antenna receives the first and second input signals over a common frequency band. Alamouti fails to teach or suggest this additional limitation in combination with the other requirements of Claim 23.

Dependent Claim 33 requires and positively recites a mobile communication system as in claim 23, wherein the first input signal comprises a data symbol and the second input signal comprises a complex conjugate of the data symbol. Alamouti fails to teach or suggest this additional limitation in combination with the other requirements of Claim 23.

New Claim 23 confirms Applicant's statement in the amendment dated 9/26/02 in parent application 09/205,029, that Alamouti does not disclose multiple signal paths between a transmit antenna and a receive antenna (page 4, lines 22-23) – whereas the present invention does.

Claims 23-33 stand allowable over the cited art and the application is in allowable form. Applicants respectfully request allowance of the application as the earliest possible date.

Respectfully submitted,



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